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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/462,616	04/03/2000	GUNTER MARINGER	0745/61002/N	5313

7590 11/01/2005

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EXAMINER

KLIMACH, PAULA W

ART UNIT	PAPER NUMBER
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2135

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/462,616	Applicant(s) MARINGER ET AL.	
	Examiner Paula W. Klimach	Art Unit 2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 16-39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/29/05 has been entered.

Claims 1-15 are cancelled. New claims 16-39 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-18, 20, 25-30, and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over the article by Burrows ("A Logic of Authentication").

In reference to claims 16 and 28 Burrows discloses the Needham-Schroeder in which A and B are mutually authenticated (Section 5 pages 17-18). The authentication system of Needham-Schroeder includes the steps listed below. Receiving, at the network, a triplet data set from an authentication center, the triplet data set including a first random number (challenge 1), a first response (response 1) and a second response (response 2) {page 18 message 2}, wherein

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Na corresponds to the second response; Kab corresponds to the first response; and Kab encrypted by Kbs, (Kab, A)Kbs, corresponds to the first challenge. Sending the first random number (challenge 1) to the terminal; wherein the first random number corresponds to the encrypted value (Kab, A) encrypted by Kbs, and B corresponds to the terminal (page 18). Receiving, from the terminal, a first calculated response, calculated by the terminal based on the first random number (challenge 1), wherein the first calculated response is used as a second challenge (challenge 2) {page 18}. A sends the message 3 which is the first challenge that is followed by a response by B wherein B calculates the decryption of the key Kab and sends the response {Nb}Kab and first response. In the system disclosed by Burrow A authenticates the terminal, B, by matching the first calculated response with the first response that corresponds with message 4. The system then sends the message 5 that corresponds to the second response to the terminal. The network is authenticated by the terminal by matching a Nonce (Nb), which performs the function of the second response, and the calculated response using the message 4, which corresponds to the first response with the response calculated by the terminal from the first random number with the second response.

As stated earlier, the nonce Na corresponds to the second response, however this particular nonce is not sent from A to B as the second response.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use the Nonce that is sent from server S as the nonce that is sent to the terminal B for the mutual authentication process and therefore perform the function of the second response. One of ordinary skill in the art would have been motivated to do this because the system already sends a nonce from the server S and the system A is able to decrypt the data sent

from the server S and then forward the information to B, further using the nonce that is sent from the server S would reduce the amount of processing that the terminal B would be required to perform and therefore decrease the processing time.

In reference to claims 17 and 29 the terminal calculates the response from the first random number using an internally stored key {Kbs, page 18}.

In reference to claims 18 and 30 the terminal calculates the second calculated response from the first random number {message 3}.

In reference to claim 20 wherein to use the first calculated response of the terminal as the second challenge (Challenge 2), a shorter length of the first calculated response is filled out make up a greater length of the second challenge (Challenge 2) {message 3 page 18}.

In reference to claims 27 and 38-39 wherein the authentication center calculates the triplet data sets requested by the network and transmits the calculated triplet data set to the network off-line and independently of time, on request by the network, and before data interchange between the network and the terminal {page 18}.

In reference to claims 25-26 and 37, wherein the network is a wire-based network (see Fig. on page 18).

Claims 19 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrow as applied to claim 16 above, and further in view of Douceur et al (6,021,203).

Wherein multiple triplet data sets are received from the authentication center and stored on the network as a stockpile to reduce the number of times triplet data sets must be received.

Although Burrows discloses sending the triplet from the authentication center, S, to the A, Burrow does not expressly disclose sending multiple triplet data sets as a stockpile.

Douceur discloses a protocol provided for transmitting low security messages and high security messages with one-time pad cryptosystem (abstract). The system sends multiple keys that correspond to the multiple triplets (part 46 Fig. 4).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to sending multiple triplet data sets as a stockpile as in Douceur in the key exchange between the server and A in the system of Burrows. One of ordinary skill in the art would have been motivated to do this because the use of large non-repeating set of truly random key letters creates a high security encryption method.

Claims 21-24, 32-35, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrow as applied to claim 16 above, and further in view of Tsubakiyama (5,544,245)

In reference to claim 24 and 36, wherein the network is a GSM network and wherein the network is a wire-based network. Tsubakiyama discloses the network in Fig. 2. The GSM is a type of wireless network and therefore is encompassed in Tsubakiyama's description.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to method of Tsubakiyama. One of ordinary skill in the art would have been motivated to do this because wireless devices are more portable therefore a system with wireless connection provides the user flexibility.

In reference to claims 21, 32, and 35 wherein the filling-out is performed on a subscriber-specific basis; and the complete length of the first calculated response is shortened before transmission.

Tsubakiyama discloses the manipulation of the data sent to the subscriber (user) to create a key (column 5 lines 12-15).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to the filling-out is performed on a subscriber-specific basis; and the complete length of the first calculated response is shortened before transmission. One of ordinary skill in the art would have been motivated to do this because it would tailor the system to the users needs and therefore make the system more flexible.

In reference to claim 22-23 and 33-34 wherein the first calculated response is filled out with defined bits from an internally stored key to make up the length of the second challenge.

Tsubakiyama discloses the manipulation of the data sent to the subscriber (user) to create a key (column 5 lines 12-15).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to fill out the first calculated response with defined bits form an internally stored key to make up the length of the second challenge. One of ordinary skill in the art would have been motivated to do this because longer keys are safer keys and therefore the lengthening of the keys will increase the security of the system.

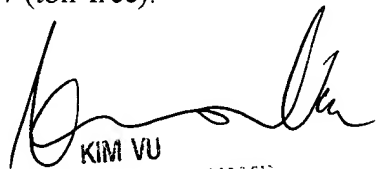
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paula W. Klimach whose telephone number is (571) 272-3854. The examiner can normally be reached on Mon to Thr 9:30 a.m to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PWK
Monday, October 31, 2005


KIM VU
EXAMINER
TECHNOLOGY CENTER 2100